

IN THE CLAIMS:

Please cancel claims 1-35 and claims 38-40 as directed to a non-elected invention, without prejudice to presentation in a divisional application. Also, please add new claims 44-51 as reflected in the listing of the claims and their status that follows:

Claims 1-35. (Original) (Cancelled)

36. (Original) A method for dynamic stabilization of motion segments of the spine comprising the steps of:

positioning a stabilization element adjacent the spine, the stabilization element configured to span a length of the spine between at least two motion segments;

engaging bone anchors to at least two motion segments; and

coupling the bone anchors to the stabilization element, with at least one of the bone anchor coupled to permit deflection of the bone anchor between the stabilization element and the motion segment.

37. (Original) The method for dynamic stabilization according to claim 36, further comprising the step of repairing or replacing all or part of the intervertebral disc between at least two motion segments.

38. (Original) The method for dynamic stabilization according to claim 37, wherein the step of repairing or replacing includes replacing all or part of the nucleus pulposus with a polymeric prosthesis having physical properties substantially similar to the physical properties of a natural nucleus pulposus.

38(B). (Cancelled)

39. (Cancelled)

40. (Cancelled)

41. (Original) A method for dynamic stabilization of a motion segment of the spine comprising the steps of:

introducing a device into an intervertebral space to at least partially maintain or restore the natural motion of the disc at the motion segment; and

coupling a dynamic stabilization system across the motion segment, the system including at least one bone anchor that permits natural motion of the disc by deforming a portion of the bone anchor.

42. (Original) The method for dynamic stabilization according to claim 41, wherein the device includes a device for replacing or augmenting the nucleus pulposus of the intervertebral disc.

43. (Original) The method for dynamic stabilization according to claim 42, wherein the step of introducing a device includes introducing a polymeric prosthesis to replace or augment the nucleus pulposus in which the polymeric prosthesis exhibits physical properties similar to the natural nucleus pulposus

44. (New) The method for dynamic stabilization according to claim 43, wherein the polymeric prosthesis is formed from a hydrogel.

45. (New) The method for dynamic stabilization according to claim 42, wherein the device for replacing or augmenting the nucleus pulposus is a mechanical device.

46. (New) The method for dynamic stabilization according to claim 41, wherein the bone anchor includes:

an engagement portion configured for engagement within the motion segment;
a head portion configured for engagement to a stabilization element outside the vertebral body; and
a flexible portion between said engagement portion and said head portion.

47. (New) The method for dynamic stabilization according to claim 41, wherein the dynamic stabilization system includes:

a stabilization element configured to span a length of the spine between at least two motion segments; and

at least two anchors, each of said anchors including a head portion configured for contacting said stabilization element and an engagement portion configured for engaging a motion segment, and at least one of said anchors including a flexible portion between said head portion and said engagement portion configured to permit relative movement between said head portion and said engagement portion.

48. (New) A method for dynamic stabilization of a motion segment of the spine comprising the steps of:

introducing a device into an intervertebral space to at least partially maintain or restore the natural motion of the disc at the motion segment; and

coupling a dynamic stabilization system across the motion segment that permits natural motion of the disc.

49. (New) The method for dynamic stabilization according to claim 48, wherein the device includes a device for replacing or augmenting the nucleus pulposus of the intervertebral disc.

50. (New) The method for dynamic stabilization according to claim 49, wherein the step of introducing a device includes introducing a polymeric prosthesis to replace or augment the nucleus pulposus in which the polymeric prosthesis exhibits physical properties similar to the natural nucleus pulposus.

51. (New) The method for dynamic stabilization according to claim 50, wherein the polymeric prosthesis is formed of a hydrogel.